

IN THE CLAIMS

Claims 1-17 have been canceled without prejudice. New Claims 18-51 have been added.

Claims 1-17 (canceled).

18. A method of coating a stent, comprising:

positioning a stent on a gear, the gear being supported by a mandrel;

rotating the mandrel to cause the gear to provide rotational motion to the stent; and

applying a coating material to the stent.

19. The method of Claim 18, wherein an outer surface of the mandrel does not make contact with an inner surface of the stent.

20. The method of Claim 18, wherein applying the coating material comprises spraying a composition including a polymer added to a solvent, and optionally an active agent added thereto, onto the stent.

21. The method of Claim 20, wherein the composition is sprayed onto the stent in a downward direction.

22. The method of Claim 18, additionally comprising moving the stent in a linear direction along a longitudinal axis of the stent during the application of the coating material.

23. A method of coating a stent, comprising:

positioning a stent on a gear, the gear having a textured or roughened surface;

rotating the gear to provide rotational motion to the stent; and

applying a coating material to the stent.

24. The method of Claim 23, wherein the gear is configured to support the stent on an inner surface of the stent.

25. The method of Claim 23, wherein the gear is integrated with a mandrel.

26. The method of Claim 25, wherein the gear has a diameter greater than a diameter of the mandrel.

27. A method of coating a stent, comprising:
positioning a stent on a gear, the gear having teeth;
rotating the gear to provide rotational motion to the stent; and
applying a coating material to the stent.

28. The method of Claim 27, wherein the gear is configured to support the stent on an inner surface of the stent.

29. The method of Claim 27, wherein the gear is integrated with a mandrel.

30. The method of Claim 29, wherein the gear has a diameter greater than a diameter of the mandrel.

31. A method of coating a stent, comprising:
positioning a stent on a gear, the stent comprising struts and gaps disposed between the struts, wherein the gear has teeth sized to fit into the gaps of the stent;
rotating the gear to provide rotational motion to the stent; and
applying a coating material to the stent.

32. The method of Claim 31, wherein the gear is configured to support the stent on an inner surface of the stent.

33. The method of Claim 31, wherein the gear is integrated with a mandrel.

34. The method of Claim 33, wherein the gear has a diameter greater than a diameter of the mandrel.

35. A method of coating a stent, comprising:
positioning a stent on a gear, the gear supported by a mandrel and configured to allow the stent to rest on the gear so as to form a contact area between an outer surface of the gear and an inner surface of the stent;

rotating the mandrel to cause the gear to provide rotational motion to the stent, wherein a shape or diameter of the gear is configured so that the contact area changes location as the stent is rotated; and

applying a coating material to the stent.

36. The method of Claim 35, further comprising a second gear integrated with the mandrel, wherein the second gear is configured to allow the stent to rest thereon.

37. The method of Claim 35, wherein the gear is substantially circular along an outer circumference of the gear.

38. The method of Claim 35, wherein the gear has teeth.

39. The method of Claim 35, wherein the gear is adjustably integrated with the mandrel.

40. The method of Claim 35, wherein the gear is star-shaped.

41. A method of coating a stent, comprising:
positioning a stent on a mandrel, the mandrel comprising a body extending into the stent and including a textured or roughened surface area for the stent to rest thereon; and
applying a coating material to the stent.

42. The method of Claim 41, further comprising rotating the mandrel to provide rotational motion to the stent.

43. A method of coating a stent, comprising:
adjusting a position of a gear along a length of a mandrel;
positioning a stent on the gear;
rotating the mandrel to rotate the stent; and
applying a coating material to the stent.

44. The method of Claim 43, wherein the gear is positioned to support an inner surface of the stent as the coating material is applied to the stent.

45. The method of Claim 43, wherein the gear has a threaded bore to allow the gear to be adjusted along the length of the mandrel.

46. A device for supporting a stent, comprising:
a mandrel capable of extending through a hollow body of a stent; and
a gear supported by the mandrel having a diameter greater than a diameter of the mandrel and positioned on the mandrel to support the stent on an inner surface of the stent and to provide sufficient torque to the stent for rotating the stent during a coating process.

47. The device of Claim 46, wherein the positioning of the gear on the mandrel is adjustable.

48. The device of Claim 46, wherein the diameter of the gear is less than an inner diameter of the stent.

49. The device of Claim 46, wherein an outer surface of the mandrel does not contact the inner surface of the stent.

50. A device for supporting a stent during a coating process, comprising:
a mandrel extending through a hollow body of a stent; and
a gear supported by the mandrel having a diameter greater than a diameter of the mandrel and a diameter smaller than an inner diameter of the stent, the gear configured to provide support to an inner surface of the stent during a coating process.

51. A device for supporting a stent, comprising:
a mandrel to support a stent during a process of forming a coating on the stent; and
a gear adjustably supported by the mandrel and configured to contact an inner surface of the stent.